PONY

سلسلة كتب الأستاذ

ICT

6th Primary Final Revision

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Summary Unit 1 Final Revision

Lesson 1

Computer Networks:

They are groups of computer devices that are connected to each other to communicate and share information.

Network devices:

1. **Modem:**
   - It connects the Internet in your home.

Signal From the ISP → Modem → Digital Signal

2. **Switches:**
   - They send data to a specific device over a network, which helps make connections easier and faster (intelligent devices).

3. **Router:**
   1. It is a device that provides the Internet throughout the home.
   2. It sends data between home devices.
   3. It connects devices using wires or wirelessly, using Wi-Fi.
4. **Cables and Ports:**
   - Some devices connect to the Internet through wires (Ethernet cables).
   - These wires are plugged into holes, called ports.
5. **Local Area Network (LAN)**
   - A LAN, which connects devices via cables, is a type of wired network.
   - Example: A school computer lab

Types of Networks:

1. Wired networks: They use physical wiring cables that plug into ports.
2. Wireless networks: They connect devices without wiring through a wireless or Wi-Fi.

Artificial Intelligence (AI):

It is a comprehensive term for computer applications that perform complex tasks simulating the thinking and performance of the human element, such as the ability to learn and reason.

Applications of AI:

1. The ability to learn and deduce.
2. Write an article on a topic.
3. Imitate sounds.
4. Create videos.
5. Predict the faults that may occur in networks.

Lesson 2

Augmented Reality (AR) combines the real world with a virtual world by displaying 3D models that look like the real world.

- **Example of AR:** Phone games that place cartoon characters in the real places around you.

Virtual Reality (VR): It is a virtual 3D environment that allows users to explore and interact with the surroundings as if it were reality.

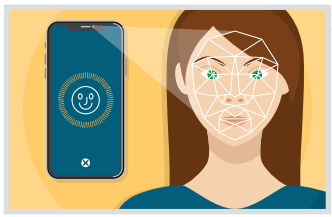
To experience VR, users often wear a VR headset that blocks out the real world and provides immersive views

Applications of VR:

1. You can visit far museums virtually.
2. You can play video games that make you feel like flying a plane or traveling in space.

Artificial Intelligence (AI): It is the ability of the computer to think, learn, and deduce.

Examples of AI:



1. It predicts the word you will write from the words you have written previously.
2. AI is used to unlock your phone with facial recognition.
3. Robots that can manufacture products in factories.

Lesson 3

- Goals of **assistive technology** is to:
  1. Improve independence of individuals.
  2. Improve the lives of people of determination.
- **Examples:**
  1. Smartphones enlarge text or use voice commands for people with poor vision or hand difficulty.
  2. Laptops with a **Braille terminal** help **blind** people read and write.
- **User Experience:** It describes how people use and interact with a product, and how to evaluate their experiences. It may be positive or negative.
- **Factors to evaluate a user experience, it can be:**
  1. Useful and easy to use.
  2. Desirable.
  3. Accessible.
  4. Developed.

Lesson 4

1. **The Egyptian Knowledge Bank (EKB):**
   - It's a very large **public database**.
2. **Internet Search:**
   - Such as Google search.
   - Be careful; it may give unreliable information.
3. **Searching Within a Database:**
   - You can use keywords in your search.
4. **The Alexandria Library Catalog:**
   - It helps you find books and resources available in the Library of Alexandria.

- **Library Catalog:** It is a database that includes all the items owned by a library.

Database

It contains a lot of information, like a very organized library, where each place of information has a specific place that makes it easy to access.

- قاعدة البيانات: تحتوي على الكثير من المعلومات، مثل مكتبة كبيرة ومنظمة؛ حيث يكون لكل معلومة مكان محدد يجعل الوصول إليها سهلاً.

Command	Shortcut	Function
Copy	Ctrl + C	• It's used to make a copy of the selected item. • Select item → Press Ctrl + C
Cut	Ctrl + X	• It's used to move the selected item from its original place. • Select item → Press Ctrl + X
Paste	Ctrl + V	• It's used to place the copied or cut item in a new place. • After copying or cutting → Press Ctrl + V

Lesson 5

Operating System (OS): It is the software that manages a computer's functions, hardware, and software.

Microsoft Windows	macOS
• It's one of the most popular worldwide. • It uses closed-source software.	• It runs on Apple computers, such as MacBook and iMac.

Mobile Operating Systems:

The most popular mobile OSs are Android and Apple iOS.

Android	Apple iOS
It's the most popular operating system for mobile devices, used by many phone companies.	• It runs on iPhone and iPad. • It is very safe and uses closed-source software.

- **Open-source Software:** It means a person can change and read the programming code.
- **Closed-source Software:** No one can see its code or modify it, except the owner.
- **Advanced Operating Systems:**
  1. The Robot Operating System (ROS)
  2. Self-driving Cars Operating Systems

Lesson 6

- Hyper Text Markup Language (HTML) is the standard programming language used to create web pages.

HTML Tag	Usage
<html>	• It's the main tag in the page. • It defines the start and the end of the HTML page.
<head>	• It contains important information about the pages that do not appear to the user, such as the page title in the browsing bar.
<title>	• It defines the page title shown on the browser tab.
<body>	• It contains all the content that will appear on the page, such as the text and images.
.....	• It contains the largest heading.

.....	• It contains the subheading.
.....	• It contains the smallest heading.
.....	• It's used to write a paragraph of a text.
.....	• It's used to make a text *italic.*
.....	• It's used to make a text **bold.**
<img>	• It's used to insert an image.

- When you finish writing the HTML code:
  - Save the HTML file with the extension ".html".
- HTML tags have three main parts: an opening tag, the content, and a closing tag.
- Most tags have an opening tag and a closing tag.

Summary Unit 2 Final Revision

Lesson 1

Disadvantages of online games:

1. **Physical dangers:**
   1. Back and neck problems
   2. Eye dryness and blurry vision
   3. weight gain
2. **Psychological dangers:**
   1. Bullying: don't respond and inform your family.
   2. Gaming addictions may cause aggressive feelings. This negatively affects your study, sleep and family and friends time.
3. **Security dangers:**
   1. Chatting with strangers.
   2. Sharing personal information.
   3. Clicking unknown links; these links may lead to stealing your personal information or spreading viruses.

Responsible Gaming Practices:

To avoid physical dangers:

1. Take breaks from the screen.
2. Stay active and exercise.

To avoid psychological dangers:

1. Set fixed play times.
2. Don't use games to escape problems.

To avoid security dangers:

1. Don't share your personal info online.
2. Play only with people you know.
3. Use privacy settings.

Lesson 2

Passwords:

- Use at least eight random characters of letters, numbers, and symbols.
- Secure passwords must be difficult to guess.

Multi-Factor Authentication (MFA):

- It requires at least two ways to identify yourself.

Fingerprint Authentication:

- It scans your finger for confirmation.

Facial Recognition:

- It uses your device's camera to recognize your face.

Full Encryption:

- It protects your information.

If your data is exposed to risk:

1. Inform your parents or a trusted person.
2. Report data theft to the responsible authorities.

Lesson 3

Cybersecurity: is the protection of our devices and our personal information from any danger on the Internet such as hackers or viruses.

Online Safety Precautions:

Use Strong Passwords:

1. Create a strong password that's hard to guess.
2. Change it every 3 months.

Safe Sharing:

1. Don't share personal info online.
2. Avoid posting photos, phone numbers, addresses, or school names.
3. Share positive ideas, drawings, or hobbies instead.

Dealing with Strangers:

1. Don't communicate with people you don't know.
2. Avoid anyone who makes you feel uncomfortable.

Security Software:

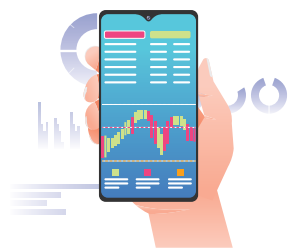
1. Use anti-virus software.
2. Use secure web browsers.

Types of Cybersecurity Threats:

1. **Malware:**
   1. **Problem:** Fake messages claiming your device has a virus and asking you to click a link.
   2. **Solution:** Ignore the message, don't click the link, and verify the source.
2. **Spoofing:**
   1. **Problem:** Fake requests from companies or famous people asking for personal information.
   2. **Solution:** Never share personal info to avoid theft or money loss.

Lesson 4

- **Intellectual Property Right:** It protects new and creative works like inventing a game, writing a story, painting a picture.
- **Copyright:**
  1. It's a part of the intellectual property right.
  2. It protects artistic and literary works, such as songs, movies, and books.
  3. It encourages creators to produce more.
- **Creative Commons:** Works that have been granted permission to share.
- **Stock Exchange:**
  - It's a market for buying and selling company stocks (shares).
- **Stocks (shares):** They are a small part of a company's ownership.
- **E-Trading:**
  1. In the past, people had to visit the stock exchange to buy and sell shares.
  2. Now, special Internet apps allow trading from anywhere.



- **How E-Trading Helps in Financial Consultation:**
  1. Online apps provide financial guidance and services.
  2. Robo-advisors are Internet applications that give financial advice.

Functions of Robo-advisors:

1. They analyze thousands of company news in seconds.
2. They provide simple advice based on the information.
3. They do not make decisions for the person; they only give advice to help them decide.

Lesson 5

Cloud Computing:

1. It's large online storage for data and programs.
2. It stores photos, work, games, and files.
3. You can access files anytime, anywhere, from any device.
4. You can share files easily with others.
5. It keeps important files safe from loss or damage.

Advantages:

1. Never lose files.
2. Easy sharing.
3. Saving space.
4. Easy access.
5. Data encryption.

Disadvantages:

1. Requires Interent.
2. Security risks.
3. Additional cost.

Examples of Could Computing Service Providers:

1. Google Drive: It's a popular service for storing and accessing files from anywhere.
2. OneDrive: It's a Microsoft's service, similar to Google Drive.
3. Dropbox: It's a cloud storage application by the Dropbox company.

Lesson 6

Sharing Via Cloud:

- You can send photos or files to your friends in other countries using cloud apps like WhatsApp.
- Cloud storage is safer than traditional device storage.

Microsoft 365:

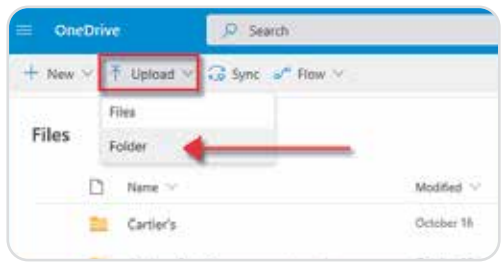
- It's an important cloud-based suite with apps like:

1. Teams
2. Word
3. Excel
4. PowerPoint
5. Outlook
6. OneDrive

OneDrive:

- It's a cloud storage app for storing, sharing, and accessing files from any device with the Internet.
- It is safer and more practical than traditional storage limited to your device.

How to upload files or folders to OneDrive:



1. Open the OneDrive app or website.
2. Click the "Upload" or "Add" button.
3. Select the file or folder to save in the Cloud.
4. Wait for the uploads to complete.
5. Look for the confirmation sign that the file is saved.
6. Access the file from any device using your OneDrive account.

Questions Final Revision

1 Choose the correct answer from the following:

1. ..... is a technology that help imitate the sound of an actual human being
   A. Artificial intelligence B. Speaker
   C. Bluetooth D. Assistive technology
2. LAN is considered as a group of computers connected together with cables from the ..... network
   A. Wired B. Wireless C. Wide range D. Wi.Fi
3. The cables and wires in wired networks are plugged into holes are called .....
   A. Ports B. Wi-Fi C. Switches D. Modem
4. The programmers are using ..... language to create webpages
   A. Automative B. MacOS C. HTML D. Apple iOS
5. ..... help in sending data to a specific device via network easily
   A. Switches B. Ports C. Mouse D. Wi-Fi
6. ..... is used to convert signal from ISP to digital signal
   A. Modem B. Ports C. Switches D. Wi-Fi
7. ..... is an operating system, and it's open-source program to build robot applications
   A- Microsoft windows B- Robot operating system (R.O.S)
   C- Android D- Apple iOS
8. ..... is doing a complex task that simulate the performance and thinking of human
   A- Artificial intelligence B- Switches
   C- Digital footprint D- Wired network
9. The wireless networks are connected using .....
   A- Ports B- Wi-Fi C- Switches D- Modem
10. ..... is used as a 3D environment that allows user to interact as if it a reality
    A- Virtual reality B- Switches
    C- Digital footprint D- Assistive technology

11 ..... is a technology used for unlock your phone using facial recognition
A. Assistive technology B. Artificial intelligence
C. Virtual reality D. Switches

12 Braille is used mainly by ..... people.
A- blind B- deaf
C- programmers D- designers

13 ..... technology improves the lives of people with disabilities.
A- Traditional technology B- Assistive technology
C- Past technology D- Piracy

14 ..... is the important goal of assistive technology
A. Difficult usability B. Improve someone's independence
C. Not useful to others D. Difficult accessibility

15 ..... is from the points to be considered when buying a good product
A- Usability (usable) B- Difficult usability
C- Manufacturing country D- No need to it

16 ..... is a technology that goal for meet the needs of people of determinations
A. Assistive technology B. Traditional technology
C. Digital footprint D. Piracy

17 ..... are group of information usually stored inside a computer system
A. Printed books B. Databases
C. Search engines D. Digital search tools

18 ..... is a database that contain all the sources and items owned by a library
A- Library catalog B- Internet
C- Paint program D- Search engine

19 You can immerse to an ancient historical site and thousand years ago, using .....
a. Virtual reality B. Modem C. Bluetooth D. Router

20 ..... is a technology that combine real world with a virtual world
A- Router B- Augmented reality
C- Bluetooth D- Digital fingerprint

21 Internet service provider is abbreviated as .....
A. ISP B. USB C. GPS D. GPR

22 You can wear a headset to deal with a technology called .....
A. Virtual reality B. Digital footprint C. Piracy D. Scanner

23 It is preferable for passwords to contain at least ..... characters.
a. five b. eight c. three d. four

24 MFA requires at least ..... ways of identifying yourself.
a. two b. three c. eight d. four

25 One of the best secure methods to confirm your identity is ..... .
a. writing the name of your school b. fingerprint authentication
c. typing the name d. writing the date of birth

26 ..... is the software that scans your face using your device's camera.
a. Pattern b. Facial recognition
c. Fingerprint d. None of them

27 A strong password should include ..... .
a. capital and small letters b. numbers
c. symbols d. all of them

28 If your data is at risk, the first step is to ..... .
a. ignore it
b. inform your parents or a trusted person
c. delete everything d. share it online

29 Fingerprint authentication usually scans your ..... .
a. eye b. face c. finger d. palm

30 Multi-Factor authentication is mainly used to ..... .
a. design games b. verify your identity
c. download apps d. play videos

31 ..... is the standard programming language used to create a webpage
A- Microsoft windows B- Word
C- Android D- HTML

32 ..... is the tag that used to create a paragraph
A- B- <h1> C- <i> D-

33 The closing tag for creating a paragraph in HTML is ..... .
a. b. c. </para> d. <end p>

34 HTML tags have ..... main parts.
a. two b. three c. four d. five

35 The main tag that defines the start and the end of the entire web page is .....
a. <head> b. <body> c. <h1> d. <html>

36 Programmers use the Hyper Text Markup Language (HTML) to create .....
a. web pages b. games c. sources d. databases

37 Information that does not appear to the user on the web page is included within the ..... tag.
a. <body> b. <head> c. <p> d. <i>

38 The <h1>.....</h1> tag refers to ..... .
a. creating a paragraph b. the largest heading
c. the subheading d. creating a link

39 All content that is visible on the web page is placed inside the ..... tag.
a. <title> b. <html> c. <body> d. <head>

40 To save an HTML file, the file name should end with the extension .....
a. .txt b. .doc c. .html d. .pdf

41 ..... requires at least two ways to verify your identity
A. Passwords B. Full encrypt
C. Fingerprint authentication D. Multi-factor authentication (MFA)

42 In facial recognition you must use ..... of the user to open your device or applications on your device
A- Face B- Finger C- Password D- Voice

43 A fake domain pretending to be a business is an example of ..... .
a) spoofing. b) malware.
c) antivirus. d) scareware

44 From safety precautions online is .....
a) Sharing your personal information online.
b) Use secure internet browsers.
c) communication with people you don't know.
d) Using weak passwords.

45 ..... includes written, visual, audio, video, and web materials
a) Malware. b) E-trading.
c) Intellectual property rights. d) Programming language

46 ..... are online applications that provide financial guidance and services
a. EKB.
b. Robo-advisor.
c. Stock exchange.
d. Brokers.

47 .....is the on-demand storage and access of data and programs via remote servers on the internet.
a) Cloud computing
b) Hard disk drive
c) copyright
d) Desktop software

48 One of the disadvantages of using cloud computing is.....
a) Improving storage capacity on devices.
b) The ability to access your files from multiple devices
c) The possibility of data breaches.
d) Ability to share files with authorized users.

49 ..... provides a backup for your files.
a. A web browser
b. A search engine
c. Social media
d. Cloud computing

50 The continuous focus on a screen for a long time may result in ..... .
a. blurry vision
b. eye dryness
c. stronger memory
d. both a and b

2 Put (✓) or (✗) in Front of the following sentences:

1. Artificial intelligence can imitate the sounds of people. (....)
2. Wireless networks are connected by Wi-Fi. (....)
3. The router only uses Wi-Fi to distribute the Internet inside the house. (....)
4. Virtual reality (VR) is a virtual 3D environment. (....)
5. AI can predict words based on previous writing. (....)
6. Artificial intelligence (AI) is the computer's ability to think, learn, and deduce. (....)
7. A user experience describes how people use and interact with a product. (....)
8. A home robot cleans floors automatically, so it is useful and easy to use. (....)
9. Copy, cut and paste are from the most important commands being used in word processing application (....)
10. Keywords can be used to search inside the database. (....)
11. Specialized search engines help in searching for needed information. (....)
12. Alexandria library catalogs can be used through the library website on the internet (....)
13. Apple computers work only on Microsoft windows operating system. (....)
14. Apple iOS is considered as an "open-source" system. (....)
15. Operating system is a software that manage all computer functions. (....)
16. Robot operating system (R.O.S) is a "closed-source" program (....)
17. Operating system manages the software and hardware components of a computer. (....)
18. The most common used operating system for laptops is Microsoft windows (....)
19. It is necessary that refuse the rules that your parents set on playing games online. (....)
20. If you face risks in online games, consult your parents. (....)
21. Full encryption works to protect your information so that only you can access it. (....)
22. MFA requires at least two ways of identifying yourself. (....)

23 Facial recognition and passwords are ways to protect your digital devices. (....)
24 Passwords that consist of random letters, numbers, and symbols of eight or more in length are the most secure passwords. (....)
25 If your data is at risk, ignore the problem. (....)
26 Multi-factor authentication increases the security of your data. (....)
27 It is preferable that the password consists of numbers only. (....)
28 Fingerprint authentication is a type of authentication confirming it's you. (....)
29 If you've been a victim of data theft, there is no need to report the theft. (....)
30 Fingerprint and face recognition are secure methods to protect your data. (....)
31 HTML tags consist of three parts (....)
32 To make the bold text in a webpage, use tag. (....)
33 HTML is the standard programming language used to create a webpage. (....)
34 To write the largest header in a webpage, use <h6></h6> tag (....)
35 The <html> tag defines the start and the end of a web page. (....)
36 The content placed inside the <body> tag is visible to the user. (....)
37 The <title> tag shows the name in the browser tab. (....)
38 In HTML, the <i> tag is used to display text in italics. (....)
39 The tag is used to write a bold text in the web page. (....)
40 Remote servers enable users to access their files via the internet. (....)
41 The <head> tag contains all content that appears to the user in a web page. (....)
42 Cloud computing allows users to access files and data anytime, anywhere, easily and conveniently. (....)
43 One of the disadvantages of using cloud computing is providing a backup for your files. (....)
44 Sharing your address and phone number online is risky. (....)
45 Google Drive, OneDrive, and Dropbox are examples of cloud services. (....)

46 Multi-factor authentication (MFA) requires one way to verify your identity (....)

47 Full encryption works on protecting your information so you're the only one who will have access to it (....)

48 One of the safety precautions online is to use antivirus software. (....)

49 Malware is the greatest cyber security threat. (....)

50 Creative Commons refers to work that has been granted permission to share by the creator. (....)

Answers

1

1 a	2 a	3 a	4 c	5 a	6 a	7 b	8 a	9 b	10 a
11 b	12 a	13 b	14 b	15 a	16 a	17 b	18 a	19 a	20 b
21 a	22 a	23 b	24 a	25 b	26 b	27 d	28 b	29 c	30 b
31 d	32 a	33 a	34 b	35 d	36 a	37 b	38 b	39 c	40 c
41 d	42 a	43 a	44 b	45 c	46 b	47 a	48 c	49 d	50 d

2

1 T	2 T	3 F	4 T	5 T	6 T	7 T	8 T	9 T	10 T
11 T	12 T	13 F	14 F	15 T	16 F	17 T	18 T	19 F	20 T
21 T	22 T	23 T	24 T	25 F	26 T	27 F	28 T	29 F	30 T
31 T	32 T	33 T	34 F	35 T	36 T	37 T	38 T	39 T	40 T
41 F	42 T	43 F	44 T	45 T	46 F	47 T	48 T	49 T	50 T